

Example: Pages 63-64; 95pp: English. The development of a novel method for the identification of a patient's previous sensitization to *Borrelia burgdorferi* sensu lato outer surface protein C (OspC). The method comprises reacting immunoglobulin (Ig) or T cells from the patient with a polypeptide of at most 60 amino acids containing a peptide with at least 50% identity to the *B. burgdorferi* derived sequence W41821, or its subsequences of at least 5 amino acids. The degree of immunological reactivity between the polypeptide and Ig or T cells is measured and significant reactivity is indicative of sensitization.

The method can be used to diagnose Lyme disease and is based on reactivity with antibodies against the OspC protein. The test can be done in vitro or in vivo, e.g. as a skin test. Vaccine compositions comprising the polypeptide can be used to protect humans and other animals against *B. burgdorferi* infection. The polypeptide provides higher sensitivity than full-length OspC, and so is better at detecting infection in its early stages, especially when combined with the known assay for flagellar proteins. The seven carboxy-terminal residues of W41821 represent an epitope essential for human immune response to OspC. The polypeptide is also easier to prepare and purify than (nearly) full-length protein, facilitating standardisation of the assay, and is less cross-reactive with antibodies raised against other antigens. The small size of the polypeptide allows a high density of binding sites to be created on a solid support. Incorporation of non-natural amino acid into the polypeptide increases its resistance to peptidases when used in vivo.

Sequence 212 AA:

Query Match 4.8%; Score 8; DB 28; Length 212;  
Best Local Similarity 100.0%; Pred. No. 6,48e-01;  
Matches 8; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 143 ghadlgkq 150  
11111111  
OY 121 GHADLGKQ 128

RESULT 8  
ID R5729 standard; Protein: 212 AA.  
AC R5729:  
31-JUL-1996 (first entry)  
DE B. burgdorferi strain PKO outer surface protein C (OspC-PKO).  
KM Strain PKO; outer surface protein: OspC; antigenic domain;  
KW chimeric protein; treatment: diagnosis; infection;  
KM Lyme borreliosis; immunodiagnostic assay; antibody;  
KW T-cell reactivity; chimeric.  
OS *Borrelia burgdorferi*.  
PN WO9512676-A1.  
PD 11-MAY-1995.  
PT 27-OCT-1994; U12352.  
PR 01-NOV-1993; US-148191.  
PA 29-APR-1994; US-235836.  
PA (ASU-) ASSOC UNIVERSITIES INC.  
PI Dunn JJ, Laft BJ.  
DR N-PSDB: 090716.  
PT Chimeric protein comprising 2 or more antigenic *Borrelia* polypeptides) - useful in a vaccine against Lyme borreliosis and in immunodiagnostic assays  
Example 1; Fig 14; 200pp: English.  
PS The present sequence is the B. burgdorferi strain PKO, outer surface protein C (OspC-PKO). Using chemical or enzymatic methods, peptide fragments of OspC-PKO were prep'd., and analysed by western blot to assess their ability to bind different anti-OspC monoclonal antibodies. The information obtd. was used to locate antigenic domains in OspC-PKO, the epitopes of which were mapped with the aid of site directed mutagenesis. Identical analyses were performed on a selection of Osp purified from a variety of *B. burgdorferi* strains, the results from which were utilised in the prep'n. of a pool of antigenic *Borrelia* polypeptides, and corresponding

*Borrelia* polypeptides, that do not naturally occur in the same protein, can be used in the treatment and diagnosis of *Borrelia* infections, i.e. as a vaccine against Lyme borreliosis, in immunodiagnostic assays to detect anti-*Borrelia* antibodies or to measure T-cell reactivity.

Query Match 4.8%; Score 8; DB 17; Length 212;  
Best Local Similarity 100.0%; Pred. No. 6,48e-01;  
Matches 8; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 143 ghadlgkq 150  
11111111  
OY 121 GHADLGKQ 128

RESULT 9  
ID R13140 standard; Protein: 212 AA.  
AC R13140:  
27-SEP-1991 (first entry)  
DE B. burgdorferi strain PKO pc protein.  
KM Lyme borreliosis; vaccine; flagellin.  
OS *Borrelia burgdorferi*.  
PN WO9109870-A.  
PD 11-JUL-1991.  
PT 21-DEC-1990; E02282.  
PR 22-DEC-1989; DE-942728.  
PR 13-JUN-1990; DE-018988.  
PA (MIKR-) MIKROGEN MOLEKULARB.  
PI Fuchs R, Wilske B, Preac-Mursic V, Motz M, Soutschek E;  
DR N-PSDB: 012746.  
PT New *Borrelia burgdorferi* proteins - useful as immunosassay reagents and antigens for vaccine prodn.  
PS Claim 48; 68pp: German.  
CC Protein pc (22KD) was isolated from a B. burgdorferi cell lysate and digested with trypsin. The amino acid sequence of two tryptic fragments was determined. Probe pools corresponding to each fragment were synthesised and used to screen a B. burgdorferi cDNA library. A clone contg. the 639 nucleotides of the pc derived sequence was identified and sequenced. The amino acid gene, from the pc gene is reproduced here. Decoding the 639 base pc gene, however, gives a different amino acid sequence with Thr(29)-Ser(37), CC inclusive replaced by HILILTSL. For this sequence to be directly decoded from 012748, an A residue must be inserted between G(84) and C(85) of the nucleotide sequence and T(111) must be deleted.  
CC See 012744-012747, 013297-8 and R13139-R13142.  
OY Sequence 212 AA;

Query Match 4.8%; Score 8; DB 3; Length 212;  
Best Local Similarity 100.0%; Pred. No. 6,48e-01;  
Matches 8; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 143 ghadlgkq 150  
11111111  
OY 121 GHADLGKQ 128

RESULT 10  
ID R62779 standard; Protein: 177 AA.  
AC R62779:  
25-MAY-1995 (first entry)  
DE *Borrelia* ACA1 antigen vaccine.  
KM *Borrelia* antigen; vaccine; Lyme disease; immunogen;  
KM serovar typing; restriction fragment length polymorphism;  
OS *Borrelia burgdorferi* ACA1.  
PN WO9425596-A.  
PD 10-NOV-1994.  
PT 28-APR-1994; E01365.  
PR 29-APR-1993; US-053863.  
PA (IMMO) IMMUNO AG.  
PI Crowe B, Dornier F, Livey I;

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Query Match      4.28; Score 7; Indels 0;
Query Similarity 100.08; Pred. No. 1.03e+01;
Best Local      7; Conservative 0; Mismatches 0; Gaps 0;
Matches

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RESULT 11  
560003 standard; Protein; 193 AA.

DR WPI: 34 033866, composition comprising Ospc antigens - for the  
DR N-PSDB: 073866, specific geographical

Query Match	4.28;	Score 7;	DB 12;	Length 20;
Similarity	100.0%;	Pred. No.	1 03e+01;	
Best Local		Mismatches	0;	Gaps 0;
Matches	7; Conservative			

RESULT 12  
standard: Protein; 323 AA.

AC	W56761;
DT	13-OCT-1998 (first entry)

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      . Db      291 1SSSL1a 297
          1111111
      QY      17 1SSSL1A 23

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345 1SS11a 351  
Db

OY 17 LSSSLA 23

RESULT 14  
 ID W00366 standard; Protein; 639 AA.  
 AC W00366;  
 DT 18-FEB-1997 (first entry)  
 DE Streptomyces lacto-N-biosidase.  
 KM Lacto-N-biosidase; glycosylation; sugar chain.  
 CC Streptomyces sp. 142 (FERM BP-4569).  
 OS Ep-739983-A2.  
 PN 30-OCT-1996.  
 PD 25-APR-1996; 106569.  
 PF 27-APR-1995; JP-129731.  
 PR (TAKI) TAKARA SHUZO CO LTD.  
 PA Kato I, Mita M, Sano M.  
 PI WPI; 96-478747/48.  
 DR N-PSDB; T41776.  
 PT Streptomyces lacto-N-biosidase DNA - for prodn. of recombinant  
 PT lacto-N-biosidase for determination of sugar chain structure and  
 PT function  
 PS Claim 1; Page 13-15; 27pp; English.  
 CC Streptomyces sp. 142 lacto-N-biosidase (W00366) is capable of  
 CC specifically acting on a sugar chain having the structure Gal  
 CC beta1-3GlcNAc beta1-R (R is a sugar residue), and specifically  
 CC catalysing the hydrolysis of the lacto-N-bioside bond only. It  
 CC is useful for studying the structure and biological activity of  
 CC sugar chains, esp. in cell surface glycoproteins and glycolipids.  
 CC Large-scale, low cost prodn. of the enzyme in transformed host  
 CC cells is possible using a gene sequence (T41776) isolated from a  
 CC genomic library of Streptomyces sp. 142.  
 SQ Sequence 639 AA;

Query Match 4.28; Score 7; DB 20; Length 639;  
 Best Local Similarity 100.0%; Pred. No. 1.03e+01;  
 Matches 7; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

DB 389 sllaaag 395  
 OY 19 SLLAAG 25

RESULT 15  
 ID W34153 standard; peptide; 16 AA.  
 AC W34153;  
 DT 26-FEB-1998 (first entry)  
 DE HIV-2 peptide fragment #1.  
 KM Human T-cell leukemia virus; HTLV; gp46; envelope protein; diagnosis;  
 KM Immunassay reagent; antibody detection; adult T-cell leukemia-lymphoma;  
 KM ATL; infection prevention.  
 OS Human immunodeficiency virus type 2.  
 FH Key Location/Qualifiers  
 FT Misc.difference 16  
 PN US5681696-A.  
 PD 28-OCT-1997.  
 PF 09-JAN-1987; 001885.  
 PR 22-JUN-1992; US-901874.  
 PR 09-JAN-1987; US-001885.  
 PR 13-JAN-1989; US-297635.  
 PR 24-JAN-1990; US-469291.  
 PR 01-JUN-1995; US-457865.  
 PA (UNBI-) UNITED BIOMEDICAL INC.  
 PI Wang CY;  
 PT HTLV peptide(s) - useful as immunoassay reagents for diagnosis of  
 PT adult T-cell leukemia.  
 PS Disclosure; Column 8; 24pp; English.  
 CC W34150-W34153 represent fragments of HIV-I and HIV-II. These sequences  
 CC are analogous to the peptides of the invention. The peptides of the  
 CC invention (see W34138-W34149) are fragments of HTLV-I (human T-cell  
 CC lymphotropic virus I) and HTLV-II, and analogues of these fragments.  
 CC A T-cell lymphotropic virus is also known as human T-cell leukemia

CC virus. The HTLV sequences represent peptides of the invention, and have  
 CC an optionally amidated C-terminus. The HTLV peptides may be used as  
 CC immunoassay reagents for detecting antibodies to HTLV-I/HTLV-II in the  
 CC diagnosis of adult T-cell leukemia-lymphoma (ATL). The HTLV peptides can  
 CC also be used to prevent HTLV infection.  
 SQ Sequence 16 AA;

Query Match 3.68; Score 6; DB 25; Length 16;  
 Best Local Similarity 100.0%; Pred. No. 1.37e+02;  
 Matches 6; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

DB 2 garlms 7  
 OY 38 QARLMS 43

RESULT 16  
 ID R87551 standard; peptide; 16 AA.  
 AC R87551;  
 DT 10-JUL-1996 (first entry)  
 DE Peptide #12 for the detection of HTLV-I and HTLV-II antibodies.  
 KM Immunassay; antibody; human T-cell leukemia virus; HTLV; HTLV-I; HIV-1;  
 KM HTLV-II; adult T-cell leukemia; leukemia; HIV-2.  
 OS Synthetic.  
 FH Key Location/Qualifiers  
 FT modified\_site 16  
 PN US5476765-A.  
 PD 19-DEC-1995.  
 PF 22-JUN-1992; 901874.  
 PR 09-JAN-1987; US-001885.  
 PR 13-JAN-1989; US-297635.  
 PR 24-JAN-1990; US-469721.  
 PR 22-JUN-1992; US-901874.  
 PA (UNBI-) UNITED BIOMEDICAL INC.  
 PI Wang CY;  
 PT WPI; 96-048978/05.  
 DR Detecting and distinguishing between antibodies for HTLV-I and -II -  
 PT using an assay utilizing synthetic peptide(s), for the diagnosis of  
 PT adult T cell leukemia  
 PS Claim 21; Column 36; 28pp; English.  
 CC R87540-R87558 represent synthetic peptides used in the scope of the  
 CC invention, to coat a solid support used in an immunoassay for detecting  
 CC antibodies to human T-cell leukemia viruses (HTLV), and diagnosis of  
 CC adult T-cell leukemia. A test sample where HTLV-I and HTLV-II  
 CC antibodies form a complex with the peptide used, is added to the solid  
 CC support. The mixture is then incubated and the complex detected. The  
 CC immunoassay can be used to detect HTLV-I and HTLV-II, and to distinguish  
 CC between antibodies for each of these viruses. It can also be used for  
 CC the diagnosis of cell leukemia. This method eliminates false positives,  
 CC and has an increased specificity and higher sensitivity than current  
 CC methods. This method can also be used to detect HIV-I and HIV-2  
 CC antibodies.  
 SQ Sequence 16 AA;

Query Match 3.68; Score 6; DB 17; Length 16;  
 Best Local Similarity 100.0%; Pred. No. 1.37e+02;  
 Matches 6; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

DB 2 garlms 7  
 OY 38 QARLMS 43

RESULT 17  
 ID R06326 standard; peptide; 19 AA.  
 AC R06326;  
 DT 13-DEC-1990 (first entry)  
 DE Biotinylated monomeric peptide.  
 KM HIV-2; streptavidin; cyclic.  
 OS synthetic.  
 FH Key Location/Qualifiers  
 FT misc.difference 1...

OY 17 LSLSLA 23

RESULT 14  
ID W00366 standard; Protein; 639 AA.

DE Streptomyces lacto-N-biosidase.  
KM Lacto-N-biosidase; glycosylation; sugar chain.  
OS Streptomyces sp. 142 (FERM BP-4569).

PD 30-OCT-1996.  
PF 25-APR-1996; 106569.  
PR 27-APR-1995; JP-129731.  
PA (TAKI) TAKARA SHUZO CO LTD.  
PI Kato I, Mita M, Sano M:  
DR WPI: 96-478747/48.

DR N-PSDB: T41776.  
PT Streptomyces lacto-N-biosidase DNA - for prodn. of recombinant  
PT Lacto-N-biosidase for determination of sugar chain structure and  
PT function

PS Claim 1: Page 13-15; 27pp; English.  
CC Streptomyces sp. 142 Lacto-N-biosidase (W00366) is capable of  
CC specifically acting on a sugar chain having the structure Gal  
CC beta1-3GlcNAc beta1-R (R is a sugar residue), and specifically  
CC catalysing the hydrolysis of the lacto-N-bioside bond only. It  
CC is useful for studying the structure and biological activity of  
CC sugar chains, esp. in cell surface glycoproteins and glycolipids.  
CC Large-scale, low cost prodn. of the enzyme in transformed host  
CC cells is possible using a gene sequence (T41776) isolated from a  
CC genomic library of Streptomyces sp. 142.

CC Sequence 639 AA;

Query Match 4.2%; Score 7; DB 20; Length 639;  
Best Local Similarity 100.0%; Pred. No. 1.03e+01;

Matches 7; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

DB 389 sllaeg 395  
OY 19 SLLAEG 25

RESULT 15  
ID W34153 standard; peptide; 16 AA.

DE Streptomyces lacto-N-biosidase (first entry)  
DE HIV-2 peptide fragment #1.  
KM Human T-cell leukaemia virus; HTLV; gp46; envelope protein; diagnosis;  
KM Immunodassay reagent; antibody detection; adult T-cell leukaemia-lymphoma;  
KM AT; infection prevention.

OS Human immunodeficiency virus type 2.

FT Key Location/Qualifiers  
FT Misc\_difference 16

FT US5681696-A. /note- "optionally amidated"

PD 28-OCT-1997.

PF 09-JAN-1987; 001885.

PR 22-JUN-1992; US-901874.

PR 09-JAN-1987; US-001885.

PR 13-JAN-1989; US-297635.

PR 24-JAN-1990; US-469291.

PR 01-JUN-1995; US-457865.

PA (UNBI-) UNITED BIOMEDICAL INC.

PI Wang CY;

DR WPI: 97-535047/49.

PT HTLV peptide(s) - useful as immunoassay reagents for diagnosis of

PT adult T-cell leukaemia

PS Disclosure: Column 8: 24pp; English.

CC W34150-W34153 represent fragments of HIV-I and HIV-II. These sequences  
CC are analogous to the peptides of the invention. The peptides of the  
CC invention from W34150-W34153 are fragments of HIV-I and HIV-II.

CC Virus. The HTLV sequences represent peptides of the invention, and have  
CC an optionally amidated C-terminus. The HTLV peptides may be used as  
CC immunoassay reagents for detecting antibodies to HTLV-I/HTLV-II in the  
CC diagnosis of adult T-cell leukaemia-lymphoma (ATL). The HTLV peptides can  
CC also be used to prevent HTLV infection.

CC Sequence 16 AA;

Query Match 3.6%; Score 6; DB 25; Length 16;  
Best Local Similarity 100.0%; Pred. No. 1.37e+02;  
Matches 6; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

DB 2 garlins 7  
OY 38 GARLINS 43

RESULT 16  
ID R87551 standard; peptide; 16 AA.

DE Peptide #12 for the detection of HTLV-I and HTLV-II antibodies.  
KM Immunodassay; antibody; human T-cell leukaemia virus; HTLV; HTLV-I; HIV-1;

KM HTLV-II; adult T-cell leukaemia; Leukaemia; HIV-2.

OS Synthetic.

FT Key Location/Qualifiers

FT modified.site 16 /note- "optionally amidated"

FT US5476765-A.

PD 19-DEC-1995.

PF 22-JUN-1992; 901874.

PR 09-JAN-1987; US-001885.

PR 13-JAN-1989; US-297635.

PR 24-JAN-1990; US-469721.

PR 22-JUN-1992; US-901874.

PA (UNBI-) UNITED BIOMEDICAL INC.

PI Wang CY;

DR WPI: 96-048978/05.

PT Detecting and distinguishing between antibodies for HTLV-I and -II -

PT using an assay utilizing synthetic peptide(s), for the diagnosis of

PT adult T cell leukaemia

PS Claim 21; Column 36; 28pp; English.

CC R87540-R87558 represent synthetic peptides used in the scope of the

CC invention, to coat a solid support used in an immunoassay for detecting

CC antibodies to human T-cell leukaemia viruses (HTLV), and diagnosis of

CC adult T-cell leukaemia. A test sample where HTLV-I and HTLV-II

CC antibodies form a complex with the peptide used, is added to the solid

CC support. The mixture is then incubated and the complex detected. The

CC immunoassay can be used to detect HTLV-I and HTLV-II, and to distinguish

CC between antibodies for each of these viruses. It can also be used for

CC the diagnosis of cell leukaemia. This method eliminates false positives,

CC and has an increased specificity and higher sensitivity than current

CC methods. This method can also be used to detect HIV-1 and HIV-2

CC antibodies.

CC Sequence 16 AA;

Query Match 3.6%; Score 6; DB 17; Length 16;  
Best Local Similarity 100.0%; Pred. No. 1.37e+02;

Matches 6; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

DB 2 garlins 7  
OY 38 GARLINS 43

RESULT 17

ID R06326 standard; peptide; 19 AA.

AC R06326;

DE 13-DEC-1990 (first entry)

DE Biotinylated monomeric peptide.

KM HIV-2; streptavidin; cyclic.

CC

FT /label-Lys, Orn, Acp, Abu  
 FT /note-Lys- N-epsilon-biotinyllysine or N-epsilon-  
 FT (biotinylaminocaproyl)lysine; Orn- N-delta-  
 FT biotinylornithine or N-delta-(biotinylamino-  
 FT caproyl)ornithine; Acp and Abu- biotinylated"  
 PN DE3901857-A.  
 PD 26-JUN-1990.  
 PE 23-JAN-1989.  
 PR 23-JAN-1989; 901857.  
 PA (BOE) Boehringer Mannheim GMBH.  
 PI Klein C, Bayer H;  
 DR WPI; 90-232329/31.  
 PT Sensitive immunoassay of HIV-2 antibodies with low blank values -  
 PT by incubating sample in streptavidin coated tube with biotinylated  
 PS cyclic peptide and labelled antibody receptor.  
 CC Claim 3; page 4; 4pp; German.  
 CC This peptide is used in a sensitive immunoassay of HIV-2 antibodies  
 CC streptavidin coated tube. The nucleic acid sample is incubated, in a  
 CC a labelled receptor directed against the antibodies. The lig. and  
 CC solid phases are sepd. and the amt. of label in one of them is  
 CC measured. One or more of residues 2-4 can be absent.  
 CC See also R07508.  
 SQ Sequence 19 AA;

Query Match 3.6%; Score 6; DB 2; Length 19;  
 Best Local Similarity 100.0%; Pred. No. 1.37e+02;  
 Matches 6; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 2 gaps 7  
 |||||  
 Qy 38 QARLNS 43

RESULT 18  
 ID M35484 standard; peptide; 20 AA.  
 AC W35484.  
 DT 22-APR-1998 (first entry)  
 DE HIV peptide from HIV gp36 peptide SEQ ID NO:28.  
 KW T-cell stimulatory peptide; immunogen; non-dendritic; carrier; tumour;  
 KM scaffold; inhibition; metastasis; wound healing; solid phase.  
 OS Human immunodeficiency virus type 1.  
 PN W09738011-A1.  
 PD 16-OCT-1997.  
 PE 03-APR-1997; D00146.  
 PR 03-APR-1996; DK-000398.  
 PA (PEPR-) PEPRSEARCH AS.  
 PI Heegaard PMH, Jakobsen PH;  
 DR WPI; 97-512645/47.  
 PT Non-dendritic peptide carrier linked to a solid phase - useful as a  
 PT diagnostic agent and as a scaffold for production of chemical  
 PT derivatives  
 PS Example 5: Page 89; 262pp; English.  
 CC A non-dendritic peptide carrier (A) has been developed which is coupled  
 CC through a linker to a solid phase, forming a complex of (A)-solid phase.  
 CC Where (A) comprises 10-50 amino acids capable of forming a secondary  
 CC structure in a benign buffer after liberation from the solid phase, and  
 CC further the (A)-solid phase complex comprises an immunogenic substance  
 CC and/or an immune mediator coupled on (A). The present sequence  
 CC represents a peptide used in an example from the present invention. An  
 CC (A)-solid phase complex can be used as a scaffold for the production of  
 CC chemical derivatives, characterised by covalently attaching molecules at  
 CC attachment points. Alternatively (A) is used as a scaffold-peptide for  
 CC the incorporation into an immunostimulating complex (Iscom) resulting an  
 CC substances in an aqueous solution by conjugation. (A) derivatised with  
 CC one or more peptides having fibronectin-, laminin- or vitronectin-like  
 CC binding activities can be used for the promotion of cell-attachment to  
 CC and for promotion of wound healing. Also a derivatised (A) can be used  
 CC for the selection of specifically-binding aptamers or as a diagnostic  
 CC agent. Such diagnostic-(A) molecules could be used to detect molecules  
 CC derived from or indicative of pregnancy or of a disease, such as an

CC Infectious, autoimmune or cancerous disease.  
 SQ Sequence 20 AA;

Query Match 3.6%; Score 6; DB 27; Length 20;  
 Best Local Similarity 100.0%; Pred. No. 1.37e+02;  
 Matches 6; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 4 gaps 9  
 |||||  
 Qy 38 QARLNS 43

RESULT 19  
 ID R05154 standard; protein; 20 AA.  
 AC R05154;  
 DT 09-OCT-1990 (first entry)  
 DE Fusion protein epitopic for gp41 glycoprotein of HIV-2.  
 KW HIV; AIDS; gp41; p24; vaccine.  
 OS Synthetic.  
 PN EP-371817-A.  
 PD 6-JUN-1990.  
 PE 30-NOV-1989; 312513.  
 PR 1-DEC-1988; GB-028097.  
 PA (WELL) Wellcome Foundation Ltd.  
 PI Duncan RJS;  
 DR WPI; 90-173162/23.  
 PT New peptide(s) which bind to antibody specific for HIV -  
 PT derived from portion of immuno-dominant epitope on the gp41  
 PT glycoprotein of HIV.  
 PS Disclosure; pp; English.  
 CC Fusion protein may be used to make test kits for both HIV-1 and  
 CC HIV-2 antibodies or antigens.  
 SQ Sequence 20 AA.

Query Match 3.6%; Score 6; DB 1; Length 20;  
 Best Local Similarity 100.0%; Pred. No. 1.37e+02;  
 Matches 6; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 6 gaps 11  
 |||||  
 Qy 38 QARLNS 43

RESULT 20  
 ID R05141 standard; protein; 20 AA.  
 AC R05141;  
 DT 09-OCT-1990 (first entry)  
 DE Peptide epitopic for HIV-1 and HIV-2.  
 KW HIV; AIDS; gp41; p24; vaccine.  
 OS Synthetic.  
 PN EP-371818-A.  
 PD 6-JUN-1990.  
 PE 30-NOV-1989; 312514.  
 PR 1-DEC-1988; GB-028098.  
 PA (WELL) Wellcome Foundation Ltd.  
 PI Duncan RJS;  
 DR WPI; 90-173163/23.  
 PT New peptide(s) which bind to antibody specific for HIV -  
 PT used for detection of antibody or antigen or for raising  
 PT specific antibodies.  
 PS Claim 1; Page 12; 13pp; English.  
 CC Protein may be used to make test kits for both HIV-1 and  
 CC HIV-2 antibodies or antigens.  
 SQ Sequence 20 AA;

Query Match 3.6%; Score 6; DB 1; Length 20;  
 Best Local Similarity 100.0%; Pred. No. 1.37e+02;  
 Matches 6; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 6 gaps 11  
 |||||  
 Qy 38 QARLNS 43

RESULT 21  
ID R77670 standard; peptide: 20 AA.  
AC R77670;  
DT 22-MAR-1996 (first entry)  
DE Thiol protected peptide 41-2-3GC mimic of HIV-1 epitope.  
DE Thiol protected peptide; HIV-1; human T cell lymphotropic virus;  
KW epitope; presentation; HIV-1; human immunodeficiency virus;  
KW cyclic viral protein epitope; HIV; human immunodeficiency virus;  
KW HIV; immunoreactivity.  
OS Synthetic.  
FH Key Location/Qualifiers  
FT misc-difference 1..3 enhance the reactivity of the peptide"  
FT modified-site 14  
FT modified-site /note="thiol protected"  
FT modified-site 20 /note="thiol protected, and amidated"  
FT modified-site 20 /note="thiol protected, and amidated"  
PN US5439792-A.  
PD 08-APR-1995.  
PF 02-JUN-1989; 360513.  
PR 02-JUN-1989; US-360513.  
PR 04-JUN-1990; US-532429.  
PR 21-OCT-1993; US-140696.  
PR (GENE) GENETIC SYSTEMS CORP.  
PA Blake J, Cole C, Coleman PF, Monji N, Montana JP;  
PI WPI: 95-283088/27.  
DR Solid phase coated with cyclic viral protein epitope with improved  
PT presentation and increased immuno-reactivity - useful for detecting  
PT HIV antibodies or antigens.  
PT Disclosure: Column 8; 13pp; English.  
PS The peptide is derived from human immunodeficiency virus type 2.  
PS R77670 mimics a cyclic epitope from human immunodeficiency virus type 2.  
CC The peptide is derived from peptide 41-2-3 (sic). This peptide is is  
CC used in the prep. of a solid phase coated with cyclic viral protein  
CC epitope with improved presentation and increased immunoreactivity, useful  
CC for detecting HIV antibodies or antigens. The peptide is synthesised  
CC with 2 Cys residues sepd. by 3-19 non-Cys residues. The SH gps. of Cys  
CC resistant to highly acidic cleavage. The protected peptide is immobilised  
CC on a solid phase and the protecting gps. then removed. The solid phase  
CC coated with peptide is then incubated so that a disulphide bridge is  
CC formed between the deprotected Cys residues.  
CC Sequence 20 AA;  
SQ

Query Match 3.6%; Score 6; DB 15; Length 20;  
Best Local Similarity 100.0%; Pred. No. 1.37e+02;  
Matches 6; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

DB 6 gartins 11  
OY 38 QARLMS 43

RESULT 22  
ID P91159 standard; peptide: 23 AA.  
AC P91159;  
DT 26-APR-1990 (first entry)  
DE Artificial peptide containing a sequence which comprises an epitope  
DE of HIV  
KW Artificial HIV peptide; HIV epitope; immunoassay kit; HIV vaccine;  
KW artificial antigen.  
FH Key Location/Qualifiers  
FT region 13..19 /note="this sequence is specifically claimed."  
FT region 13..19 /note="this sequence is specifically claimed."  
PN W08903844-A.  
PD 05-MAY-1989.  
PF 27-OCT-1988; SE0570.  
PR 28-OCT-1987; SE-004185.  
PR (FERR) Ferring AB.  
PA Trojnar J, Mahren B, Ruden U;  
PI

PT located on each side of a HIV epitope  
PS Claim 2; Page 21, lines 35-37; 27pp; English.  
CC It has an amino acid sequence which corresp. to a naturally occurring  
CC amino acid sequence for an epitope of HIV, and which further has two  
CC Cys residues on each side of the epitope. It is stabilised by a sulphur  
CC bridge between the 2 Cys residues formed by a chemical oxidation step.  
CC Also claimed are peptides having a shorter sequence. It provides  
CC an assay for the detn. of antibodies induced by HIV for use in  
CC diagnostic immunoassay kits. It may also be used as an immunising  
CC component in vaccine compns. against HIV.  
CC Sequence 23 AA;  
SQ

Query Match 3.6%; Score 6; DB 1; Length 23;  
Best Local Similarity 100.0%; Pred. No. 1.37e+02;  
Matches 6; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

DB 5 gartins 10  
OY 38 QARLMS 43

RESULT 23  
ID R88186 standard; Protein: 72 AA.  
AC R88186;  
DT 25-JUL-1996 (first entry)  
DE Protein encoded by plasmid PAK559 DNA fragment.  
DE Leader sequence; M13; insulin precursor; cassette; alpha-factor;  
KW strain; YAK580; expression; secretion; yeast; plasmid PAK559;  
KW mouse salivary amylase; carboxypeptidase; yeast; plasmid PAK559;  
KW aspartic protease 3; BARI; KEX2 protease; direct template;  
KW YAK583.  
OS Synthetic.  
PN W09534666-A1.  
PD 21-DEC-1995.  
PF 16-JUN-1995; DK0249.  
PR 16-JUN-1994; DK-000705.  
PR 29-JUL-1994; US-282852.  
PR (NOVO) NOVO-NORDISK AS.  
PA Kjeldsen TB, Vad K;  
PI WPI: 96-049693/05.  
DR N-PSDB: T10541.  
DR Expression cassette for yeast conty. synthetic leader sequence  
PT providing high yields of secreted polypeptide encoded by the  
PT cassette, also related vectors and transformed yeast cells  
PT Example 6; Fig 16; 85pp; English.  
PS The present sequence is encoded by a DNA fragment of plasmid  
CC PAK559, which was used as the direct template in the construction  
CC of the M13 insulin precursor (IP) leader sequences (LS) R88186/89.  
CC The LS are used to express the M13 IP in S. cerevisiae strains  
CC YAK580/83, providing high level expression and secretion. An  
CC expression cassette for the M13 IP in yeast, comprises 5'-3' a  
CC promoter (P), sequences encoding a signal peptide (SP), a leader  
CC sequence, a processing site (PS) and the M13 IP and an optional  
CC terminator sequence. The P can be any P functional in yeast, e.g.  
CC the alpha-factor gene P, and the SP is pref. the alpha-factor,  
CC mouse salivary amylase, carboxypeptidase, yeast aspartic  
CC protease 3 or yeast BARI SP. The PS is lysArg, ArgArg, ArgArg or  
CC LysLys, for processing by S. cerevisiae KEX2 protease.  
CC Sequence 72 AA;  
SQ

Query Match 3.6%; Score 6; DB 17; Length 72;  
Best Local Similarity 100.0%; Pred. No. 1.37e+02;  
Matches 6; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

DB 8 savlss 13  
OY 14 SAVLSS 19

RESULT 24  
ID W78751 standard; Protein: 124 AA.  
AC W78751;  
DT 22-MAR-1996 (first entry)  
DE Protein encoded by plasmid PAK559 DNA fragment.  
DE Leader sequence; M13; insulin precursor; cassette; alpha-factor;  
KW strain; YAK580; expression; secretion; yeast; plasmid PAK559;  
KW mouse salivary amylase; carboxypeptidase; yeast; plasmid PAK559;  
KW aspartic protease 3; BARI; KEX2 protease; direct template;  
KW YAK583.  
OS Synthetic.  
PN W09534666-A1.  
PD 21-DEC-1995.  
PF 16-JUN-1995; DK0249.  
PR 16-JUN-1994; DK-000705.  
PR 29-JUL-1994; US-282852.  
PR (NOVO) NOVO-NORDISK AS.  
PA Kjeldsen TB, Vad K;  
PI WPI: 96-049693/05.  
DR N-PSDB: T10541.  
DR Expression cassette for yeast conty. synthetic leader sequence  
PT providing high yields of secreted polypeptide encoded by the  
PT cassette, also related vectors and transformed yeast cells  
PT Example 6; Fig 16; 85pp; English.  
PS The present sequence is encoded by a DNA fragment of plasmid  
CC PAK559, which was used as the direct template in the construction  
CC of the M13 insulin precursor (IP) leader sequences (LS) R88186/89.  
CC The LS are used to express the M13 IP in S. cerevisiae strains  
CC YAK580/83, providing high level expression and secretion. An  
CC expression cassette for the M13 IP in yeast, comprises 5'-3' a  
CC promoter (P), sequences encoding a signal peptide (SP), a leader  
CC sequence, a processing site (PS) and the M13 IP and an optional  
CC terminator sequence. The P can be any P functional in yeast, e.g.  
CC the alpha-factor gene P, and the SP is pref. the alpha-factor,  
CC mouse salivary amylase, carboxypeptidase, yeast aspartic  
CC protease 3 or yeast BARI SP. The PS is lysArg, ArgArg, ArgArg or  
CC LysLys, for processing by S. cerevisiae KEX2 protease.  
CC Sequence 72 AA;  
SQ